

IN THE CLAIMS

Claims 1-10 (Cancelled)

Claim 11 (Withdrawn, Currently Amended): A process for the fermentative preparation of ~~an L-amino acid~~ L-methionine, comprising:

a) growing a coryneform bacterium in which the polynucleotide of claim 38 is over-expressed in a medium suitable for the production of said L-methionine, and

b) recovering, and optionally purifying, said L-methionine

~~a) fermenting the coryneform bacteria which produce the desired L-amino acid and in which at least the *metE* gene or nucleotide sequences which code for it are enhanced;~~

~~b) concentrating the L-amino acid in the medium or in the cells of the bacteria, and~~

~~c) isolating the L-amino acid;~~

~~wherein said *metE* gene comprises:~~

~~a) a polynucleotide which is at least 90% identical to SEQ ID NO: 1 or to a fragment thereof which encodes a polypeptide having homocysteine methyltransferase I activity;~~

~~or~~

~~b) a polynucleotide which encodes a polypeptide which comprises an amino acid sequence which is at least 90% identical to the amino acid sequence of SEQ ID NO: 2;~~

~~wherein said isolated polynucleotide encodes a polypeptide which has homocysteine methyltransferase I activity.~~

Claim 12-13 (Cancelled)

Claim 14 (Withdrawn, Currently Amended): The process of claim 11, wherein said coryneform bacterium is transformed with a plasmid vector ~~a strain transformed with a~~

~~plasmid vector is employed, and the plasmid vector~~ which carries the polynucleotide
sequence of claim 38 ~~which codes for the *metE* gene.~~

Claim 15 (Withdrawn, Currently Amended): The process of claim ~~11~~ 14, wherein the
coryneform bacterium contains multiple copies of said plasmid ~~expression of the~~
~~polynucleotide(s) which code(s) for the *metE* gene is enhanced.~~

Claim 16 (Cancelled):

Claim 17 (Withdrawn, Currently Amended): The process of claim 11, wherein ~~for the~~
~~preparation of L-methionine, the coryneform microorganisms have~~ bacterium has one or
more ~~enhanced~~ over-expressed gene(s) selected from the group consisting of:

- ~~17.1~~ the *lysC* gene which codes for a feed back resistant aspartate kinase,
- ~~17.2~~ the *gap* gene which codes for glycerolaldehyde 3-phosphate dehydrogenase,
- ~~17.3~~ the *pgk* gene which codes for 3-phosphoglycerate kinase,
- ~~17.4~~ the *pyc* gene which codes for pyruvate carboxylase,
- ~~17.5~~ the *tpi* gene which codes for triose phosphate isomerase,
- ~~17.6~~ the *metA* gene which codes for homoserine O-acetyltransferase,
- ~~17.7~~ the *metB* gene which codes for cystathionine gamma-synthase,
- ~~17.8~~ the *aecD* gene which codes for cystathionine gamma-lyase,
- ~~17.9~~ the *glyA* gene which codes for serine hydroxymethyltransferase, and
- ~~17.10~~ the *metY* gene which codes for O-acetylhomoserine sulfhydrylase.

Claim 18 (Withdrawn, Currently Amended): The process of claim 11, wherein ~~for the preparation of L-methionine, the coryneform microorganisms have~~ bacterium has one or more attenuated gene(s) selected from the group consisting of:

~~18.1~~ the thrB gene which codes for homoserine kinase,

~~18.2~~ the ilvA gene which codes for threonine dehydratase,

~~18.3~~ the thrC gene which codes for threonine synthase,

~~18.4~~ the ddh gene which codes for meso-diaminopimelate D-dehydrogenase,

~~18.5~~ the pck gene which codes for phosphoenol pyruvate carboxykinase,

~~18.6~~ the pgi gene which codes for glucose 6-phosphate isomerase, and

~~18.7~~ the poxB gene which codes for pyruvate oxidase.

Claim 19 (Withdrawn, Currently Amended): The process of claim 11, wherein a ~~microorganism of the species~~ said coryneform bacterium is *Corynebacterium glutamicum* is employed.

Claim 20 (Withdrawn, Currently Amended): The process of claim 19, wherein ~~the~~ said *Corynebacterium glutamicum* is strain ATCC13032/pCREmetAE ~~is employed~~.

Claim 21 (Withdrawn): The process of claim 19, wherein said *Corynebacterium glutamicum* is ~~the~~ *Corynebacterium glutamicum* strain ATCC13032/pCREmetAEY is employed.

Claim 22 (Withdrawn, Currently Amended): A process for the preparation of an L-methionine-containing animal feedstuffs additive comprising:

a) culturing an L-methionine-producing microorganism in which the polynucleotide sequence of claim 38 has been over-expressed ~~which comprises a *metE* gene~~ in a fermentation medium for a time and under conditions suitable for production of L-methionine;

b) removing water from the L-methionine-containing fermentation broth (concentration); and/or

c) removing an amount of 0 to 100 wt.% of the biomass formed during fermentation; and, optionally,

d) drying the fermentation broth obtained according to b) and/or c) to obtain the animal feedstuffs additive in a powder or granule form;

~~wherein said *metE* gene comprises:~~

~~a) a polynucleotide which is at least 90% identical to SEQ ID NO: 1 or a fragment thereof which encodes a polypeptide having homocysteine methyltransferase I activity, or~~

~~b) a polynucleotide which encodes a polypeptide which comprises an amino acid sequence which is at least 90% identical to the amino acid sequence of SEQ ID NO. 2;~~

~~wherein said isolated polynucleotide encodes a polypeptide which has homocysteine methyltransferase I activity.~~

Claims 23-24 (Cancelled)

Claim 25 (Withdrawn, Currently Amended): The process of claim 22, wherein ~~expression of a~~ multiple copies of the polynucleotide of claim 38 are expressed in said microorganism ~~which encodes the *metE* gene is enhanced.~~

Claim 26 (Withdrawn, Currently Amended): The process of claim 22, wherein said L-methionine-producing microorganism is a microorganism of the species *Corynebacterium glutamicum* is employed.

Claim 27 (Withdrawn, Currently Amended): The process of claim 26, wherein said *Corynebacterium glutamicum* is the *Corynebacterium glutamicum* strain ATCC13032/pCREmetAE is employed.

Claim 28 (Withdrawn, Currently Amended): The process of claim 26, wherein said *Corynebacterium glutamicum* is the *Corynebacterium glutamicum* strain ATCC13032/pCREmetAEY is employed.

Claim 29 (Withdrawn, Currently Amended): The process of claim 22, further comprising one or more of the following steps:

e) adding ~~one or more organic substance(s), including~~ L-methionine and/or D-methionine and/or the racemic mixture D,L-methionine, to the products obtained according to b), c) and/or d);

f) adding at least one conventional carrier ~~auxiliary~~ substances selected from the group consisting of silicas, silicates, stearates, grits and bran to the ~~substances~~ products obtained according to b) to e); and/or

g) converting the substances obtained according to b) to f) into a form stable in rumen, by coating them with a film-forming agent.

Claim 30 (Withdrawn, Currently Amended): The process of claim ~~29~~ 22, wherein a portion of the biomass is removed in c).

Claim 31 (Withdrawn, Currently Amended): The process of claim 30, wherein essentially about 100% of the biomass is removed in c).

Claims 32-37 (Cancelled)

Claim 38 (Currently Amended): An isolated polynucleotide which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO: 2 or a fragment of SEQ ID NO: 2 having homocysteine methyltransferase I activity

comprising:

- ~~a) a polynucleotide which is at least 90% identical to SEQ ID NO: 1~~
~~or a fragment thereof or~~
- ~~b) a polynucleotide which encodes a polypeptide which comprises an amino acid sequence which is at least 90% identical to the amino acid sequence of SEQ ID NO: 2, wherein said isolated polynucleotide encodes a polypeptide which has homocysteine methyltransferase I activity.~~

Claims 39-41 (Cancelled)

Claim 42 (Currently Amended): The isolated polynucleotide of claim 38, which is comprises SEQ ID NO: 1 ~~or a fragment thereof~~.

Claim 43 (Currently Amended): The isolated polynucleotide of claim 38, which ~~comprises~~ consists of the polynucleotide of SEQ ID NO: 1.

Claim 44 (Currently Amended): The isolated polynucleotide of claim 38, which encodes a polypeptide ~~comprising an amino acid sequence which is at least 90% identical to the amino acid sequence of SEQ ID NO. 2 or~~ consisting of a fragment thereof of SEQ ID NO: 2 having homocysteine methyltransferase I activity.

Claim 45 (Currently Amended): The isolated polynucleotide of claim 38, which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO: 2 ~~or a fragment thereof having homocysteine methyltransferase I activity.~~

Claim 46 (Previously Presented): The isolated polynucleotide of claim 38, which is RNA.

Claim 47 (Previously Presented): A vector comprising the isolated polynucleotide of claim 38.

Claim 48 (Previously Presented): The vector of claim 47, further comprising one or more promoter(s), regulation region(s), ribosome binding site(s), or expression cassette(s).

Claim 49 (Previously Presented): The vector of claim 47, which is capable of replication in a coryneform bacterium.

Claim 50 (Currently Amended): A host cell ~~comprising~~ transformed with the isolated polynucleotide of claim 38.

Claim 51 (Previously Presented): The host cell of claim 50 comprising more than one copy of said isolated polynucleotide.

Claim 52 (Previously Presented): The host cell of claim 50, wherein said isolated polynucleotide is present on a plasmid.

Claim 53 (Previously Presented): The host cell of claim 50, wherein said isolated polynucleotide is integrated in the chromosome.

Claim 54 (Previously Presented): The host cell of claim 50, which is a coryneform bacterium.

Claim 55 (Previously Presented): The host cell of claim 50, which is *Corynebacterium glutamicum*.

Claim 56 (Previously Presented): *Escherichia coli* strain DH α mcr/pCREmetAE deposited as DSM 14352 at the Deutsche Sammlung für Mikroorganismen und Zellkulturen (German Collection of Microorganisms and Cell Cultures), Braunschweig, Germany.

Claim 57 (Previously Presented): *Escherichia coli* strain DH α mcr/pCREmetAEY deposited as DSM 14353 at the Deutsche Sammlung für Mikroorganismen und Zellkulturen (German Collection of Microorganisms and Cell Cultures), Braunschweig, Germany.

Claim 58 (Previously Presented): An isolated polynucleotide which is the full complement of the isolated polynucleotide of claim 38.

Claim 59 (Cancelled)

Claim 60 (Cancelled)

Claim 61 (New): The process of claim 11, wherein over-expression is achieved by increasing the copy number of said polynucleotide ~~the *metE* gene~~.